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ART 34 AND 35

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

PCT/JP2003/013357



10/531919

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SP60	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2003/013357	International filing date (day/month/year) 17 October 2003 (17.10.2003)	Priority date (day/month/year) 22 October 2002 (22.10.2002)
International Patent Classification (IPC) or national classification and IPC F21S 2/00, F21V 5/00, 7/00, G02F 1/13357, F21Y 101: 02, 103: 00, G09G 3/34, 3/36, 3/20		
Applicant SHARP KABUSHIKI KAISHA		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>12</u> sheets, as follows: <div style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</div> b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <div style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application</div>

Date of submission of the demand 22 April 2004 (22.04.2004)	Date of completion of this report 11 January 2005 (11.01.2005)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/013357

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ The international application as originally filed/furnished
- ☒ the description:
- | | | |
|--------|------------|---|
| pages | 1-3, 10-33 | , as originally filed/furnished |
| pages* | 4-9/1 | received by this Authority on 17 November 2004 (17.11.2004) |
| pages* | | received by this Authority on |
- ☒ the claims:
- | | | |
|--------|-------------|---|
| pages | | , as originally filed/furnished |
| pages* | | , as amended (together with any statement) under Article 19 |
| pages* | 8-10, 29-31 | received by this Authority on 02 August 2004 (02.08.2004) |
| pages* | 20-21, 24 | received by this Authority on 17 November 2004 (17.11.2004) |
- ☒ the drawings:
- | | | |
|--------|------|---------------------------------|
| pages | 1-27 | , as originally filed/furnished |
| pages* | | received by this Authority on |
| pages* | | received by this Authority on |
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☒ the claims, Nos. 1-7, 11-19, 22-23, 25-28
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	8-10, 20-21, 24, 29-31	YES
	Claims		NO
Inventive step (IS)	Claims	8-10, 29-31	YES
	Claims	20-21, 24	NO
Industrial applicability (IA)	Claims	8-10, 20-21, 24, 29-31	YES
	Claims		NO

2. Citations and explanations

Document 1: JP 2002-55675 A (Matsushita Electric Industrial Co., Ltd.), 20 February 2002

Document 2: JP 07-191311 A (Kokusai Electric Co., Ltd.), 28 July 1995

Document 3: CD-ROM of the specification and drawings annexed to the Japanese Utility Model Application No. 81963/1991 (Laid-open No. 4133/1993) (Harrison Electric Co., Ltd.), 22 January 1993

Document 4: JP 09-45121 A (Canon Inc.), 14 February 1997

The inventions set forth in claims 20, 21 and 24 do not involve an inventive step.

Claim 20

Document 1 cited in the international search report (page 7, left column, line 26 to page 11, left column, line 40; fig. 1 to 12) sets forth a backlight positioned immediately beneath an object to be illuminated in order to illuminate said object to be illuminated, wherein a luminance inclination is formed in the horizontal and vertical direction on the surface to be illuminated of the aforementioned object to be illuminated.

Document 2 (page 3, right column, line 47 to page 4,

left column, line 21; fig. 1 to 3) sets forth a backlight unit wherein a plurality of LED light sources are positioned immediately beneath an object to be illuminated.

Controlling the luminance generated by a light source in order to control the light distribution of a backlight unit is disclosed in document 3 (page 7, lines 3 to 8; fig. 3) and document 4 (page 3, left column, line 38 to right column, line 3; fig. 1).

Claim 21

Document 1 cited in the international search report sets forth a feature wherein the luminance of light emitted by a backlight unit is differentiated for each concentric area centered around the center of the backlight unit.

Claim 24

Document 1 cited in the international search report sets forth a LCD display device illuminated by a backlight unit.

The inventions set forth in claims 8 to 10 and 29 to 31 are novel and involve an inventive step.

Claim 8

A feature wherein an area where first and second reflective layers are overlapped is formed at a position which corresponds to the central portion of the illuminated surface of the object to be illuminated is not disclosed in any of the documents cited in the international search report, and would not be obvious to a person skilled in the art.

Claims 9 and 10

A feature wherein an area where first and second reflective layers are overlapped is formed at a position which corresponds to the central portion in the horizontal and/or vertical directions of an object to be illuminated, and the luminance of a light source disposed at a position corresponding to the central portion in the vertical and/or horizontal directions is relatively high, is not disclosed in any of the documents cited in the international search report, and would not be obvious to a person skilled in the art.

Claims 29 to 31

A feature wherein an area where first and second reflective layers are overlapped is formed at a position which corresponds to the central portion in the horizontal and/or vertical directions of an object to be illuminated, and the interval between light sources disposed at a position corresponding to the central portion in the vertical and/or horizontal directions is made relatively dense, is not disclosed in any of the documents cited in the international search report, and would not be obvious to a person skilled in the art.